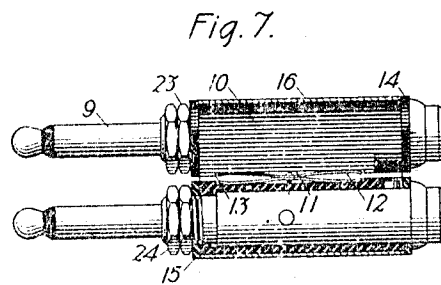
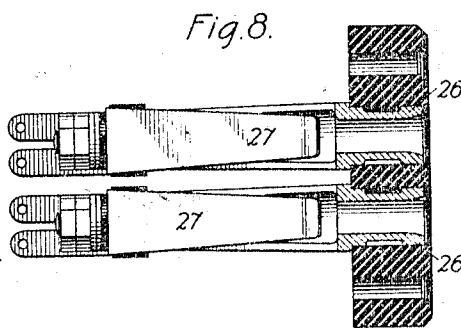
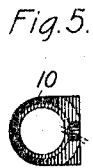
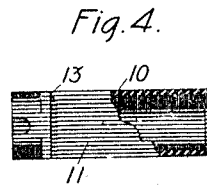
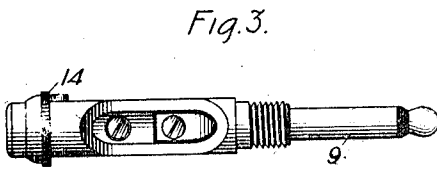
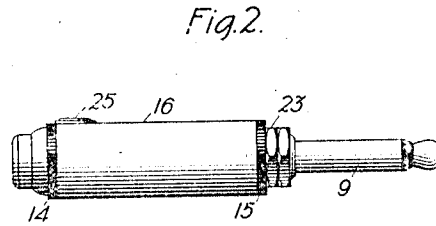
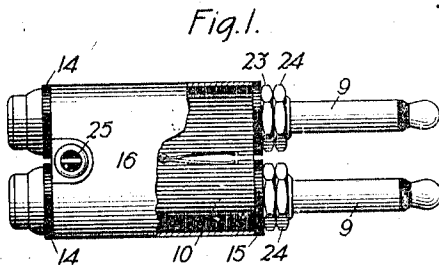


J. J. LYNG.
PLUG SWITCH.
APPLICATION FILED NOV. 18, 1909.

1,039,156.

Patented Sept. 24, 1912.



Witnesses:
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Att'y

UNITED STATES PATENT OFFICE.

JOHN J. LYNG, OF NEW YORK, N. Y., ASSIGNOR TO WESTERN ELECTRIC COMPANY, OF NEW YORK, N. Y., A CORPORATION OF ILLINOIS.

PLUG-SWITCH.

1,039,156.

Specification of Letters Patent.

Patented Sept. 24, 1912.

Application filed November 18, 1908. Serial No. 528,724.

To all whom it may concern:

Be it known that I, JOHN J. LYNG, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented a certain new and useful improvement in Plug-Switches, of which the following is a full, clear, concise, and exact description.

My invention relates to switches of the plug and socket type, more particularly to switches comprising a plurality of plugs and sockets, as for example, the so called twin plugs and jacks used in telephone switchboards as a means of connecting the operator's telephone set in circuit.

The object of my invention is to provide an efficient, simple and inexpensive switch of the aforementioned type.

Heretofore in switches comprising more than one plug and socket, as for example, the twin plug and jack referred to above, the plugs have been rigidly mounted with respect to each other, as have also the jacks. With this construction, particularly where a given plug may be used to make connection with any pair of a large number of sockets in a board, it is essential that the plugs and sockets be made and mounted with extreme accuracy in order that they may properly cooperate, and heretofore this proper engagement of the parts has been secured only through refined processes of manufacture. The switch of my invention secures the desired result without such refined methods, with the consequent saving.

In accordance with this invention one or more of the plugs of the plug-member of the switch have a limited relative lateral movement, and are preferably held in a slightly separated condition by a spring, whereby upon inserting the plug members into the sockets or jacks of the board they will automatically adapt themselves to any ordinary differences of centers on which the jacks may be mounted.

My invention will be more readily understood by reference to the accompanying drawings, in which—

Figure 1 is a plan view, partly in section, of an assembled plug-member embodying my invention; Fig. 2 is a side elevation of said plug-member; Fig. 3 is a view of one of the plugs removed from the shell

or body portion; Fig. 4 is side view partly in section of one of the insulating members; Fig. 5 is an end view of said insulating member; Fig. 6 is a perspective view of the spring member used to hold the plugs in their normal positions; Fig. 7 is a plan view showing the structure which the shell incloses, the shell and one of the insulating members being shown in section; and Fig. 8 is a plan view partly in section of a socket or jack.

Like characters of reference are used to designate like parts throughout the various figures.

Referring to the drawings showing my invention as embodied in a switch of the type used in telephone practice, 9, 9 are the plugs proper which are of the ordinary construction used in telephone practice. 10, 10 are insulating members adapted to surround the body portion of said plugs as shown in Figs. 4, 5 and 7. The insulating members 10, 10 may be formed with plane confronting recessed faces 11, 11, thereby forming a suitable bearing surface for the ends of an X shaped flat spring 12 and providing shoulders 13 adapted to retain said spring in position.

14 and 15 are insulating washers.

With the parts in the relative positions shown in Fig. 7, said parts are slipped into the shell or body portion 16, after which the insulating washers 15 are placed in position on the plugs and the entire device secured in unit form by nuts 23 and 24.

25 is an eye in the shell 16 adapted to afford a convenient means for securing the usual stay cord to the plug-member.

With the above described construction, it will be readily understood that the plugs are capable of lateral movement against the restoring force of spring 12.

In Fig. 8 a jack is shown comprising the relatively fixed sleeves or sockets 26 and the springs 27, the construction being too well understood by those skilled in the art to require detailed description.

With the plug-member and jack as described, it is obvious that if the distance between the centers of the sockets is not the same as is that between the plugs, the latter, being capable of lateral movement against the restoring spring X, will adjust them-

selves to the former and thereby insure proper mechanical and electrical engagement of the plug and socket members.

Having described my invention, I claim:

5 1. In a plug-member, the combination with a pair of plugs having a normal relative position, resilient means cooperating with said plugs to maintain them in such position, and a confining member adapted to limit
10 the outward relative movement of said plugs.

2. In a plug-member, the combination with a pair of plugs, tension means tending to separate said plugs, and a confining member limiting the separating effect of said
15 tension means.

3. In a plug-member, the combination with a shell, a pair of plugs laterally movable but longitudinally rigid therein, and a spring normally separating said plugs.

20 4. In a switch plug-member, the combination with a body portion, of a pair of plugs carried by said body portion, one of said plugs being movably mounted, and a spring between said plugs.

25 5. In a switch plug-member, the combination with a body portion, of a pair of plugs movably carried by said body portion, and a spring between said plugs.

30 6. In a switch plug-member, the combination with a shell, of two plugs movably carried within said shell, and a spring adapted to hold said plugs apart.

35 7. In a switch plug-member, the combination with a shell, of a pair of laterally movable plugs within said shell, insulating mem-

bers surrounding said plugs, and a spring between said members.

8. In a switch plug-member, the combination with a metal shell, of a pair of laterally movable plugs within said shell, insulating
40 members surrounding said plugs, a flat spring between said members, and a nut on each plug for holding said plug in position within said shell.

9. In a switch plug-member, the combination with a shell or body portion, of a pair
45 of laterally movable plugs within said shell, insulating members surrounding said plugs, and an X shaped flat spring between said members.

50 10. In a switch plug-member, the combination with a shell or body portion, of a pair of laterally movable plugs within said shell, insulating members surrounding said plugs, one of said members having a recessed side,
55 and an X shaped flat spring between said members, said spring being held in position by the shoulders of said recessed portion.

11. In a switch plug-member, the combination with a shell or body portion, of a pair
60 of laterally movable insulated plugs within said shell, and an X shaped flat spring between said plugs.

In witness whereof, I hereunto subscribe my name this seventeenth day of November
65 A. D., 1909.

JOHN J. LYNG.

Witnesses:

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